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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/068,592 05/14/98 MORITA

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IM22/1116

EXAMINER

WEINER, I

ART UNIT

PAPER NUMBER

1745

DATE MAILED:

11/16/99

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/068,592

Applicant(s)

Morita et al.

Examiner

Laura Weiner

Group Art Unit

1745



☒ Responsive to communication(s) filed on Oct 29, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-37 is/are pending in the applicat

Of the above, claim(s) 13-22 and 28-37 is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-12 and 23-27 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☒ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 1745

DETAILED ACTION

Election/Restriction

1. Applicant's election with traverse of Group I, claims 1-12, 23-27 in Paper No. 6 is acknowledged. The traversal is on the ground(s) that:

1. **That Group I and the process of making Group II, claims 13-22, 32-37 should not be restricted.**

This is not found persuasive because a national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn only to one of the following combinations of categories listed as (1)-(5). In this application, the contribution that was used in considering unity of invention was (3) a product, *a process specially adapted for the manufacture of the said product and the use of the said product*. See MPEP 1875.01.

Group I, is directed to a carbon material [product] and the method for producing a coated carbon material characterized in that the coated carbon material is produced according to claim 1 [*manufacture of that product, method 1*] and Group II is directed a method for producing a carbon material which is considered a second method which is different than Group I [*method 2*].

Therefore, Group I, remains as claims **1-12, 23-27**. There are no claims drawn to a process of using the product.

Art Unit: 1745

2. It is now PTO practice to allow in an application both product claims and process claims for producing the product, therefore where the product claims are found allowable, the process claim can be rejoined and allowed in the same application. Thus, the coating method claims must be searched to determine the patentability of the product.

This is incorrect because the inventions listed as Groups I, and II, do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features.

U.S. national stage applications filed under 35 USC 371 are subject to unity of invention practice. *For example see MPEP 1896.* An international and a national stage application shall relate to one invention only or to a group of inventions so linked as to form a single general inventive concept ("requirement of unity of invention"). Where a group of inventions shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art. A national stage application containing claims to different categories of invention will be considered to have unity of invention if the claims are drawn only to one of the following combinations of categories listed as (1)-(5). The contribution that was used in considering unity of invention was (3) a product, *a process*

Art Unit: 1745

pecially adapted for the manufacture of the said product and the use of the said product. See MPEP 1875.01.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 13-22, 32-37 and 28-31 are withdrawn from further consideration by the examiner, as being drawn to a different inventive concept under PCT Rule 13.1 , the requirement having been traversed in Paper No. 6.

Specification

3. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Claim Objections

4. Claims 4, 6, 10 and 12 are objected to because of the following informalities: Claim 4 is objected because there is an extra "l" in "crystalllinity" and "10nm" should be "10 nm". Claims 6 and 12 are objected because "1um" should be "1 um". Claim 10 is objected because "10nm" should be "10 nm". Appropriate correction is required.

Art Unit: 1745

Claim Rejections - 35 USC § 112

5. Claims 23-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 23-26 are rejected because it is unclear how the coated carbon material can be produced according to claim 1 when claim 1 is a product claim and not a process claim. It would be clearer for example if claim 23 was written to state, "A method for producing the coated carbon material of claim 1, characterized that the method comprises calcining the coated carbon material for carbonization." This would solve the rejection of an unclear method claim and would now claim the method step(s).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 3-4; 7, 9-10; 23, 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al. (EP 0 520 667 A1).

Art Unit: 1745

Tanaka et al. teaches a carbon anode for a secondary battery in which a carbon active material of the carbon anode is covered with an amorphous carbon. Tanaka et al. teaches on page 2, column 29-33, 45-46, that the carbon active material is covered with not different substance of carbon but carbon itself of low grade structure. The skin structure on the carbon surface shows amorphous like as extremely low crystallinity and small crystal size. The core structure of the carbon shows high crystallinity and comparatively large particle size. It is preferable to employ the carbon material having an interlayer distance in the c-axis ranges 0.337 to 0.360 nm. Tanaka et al. teaches in Example 1, lines 49-51, that the pellet diameter was 15 mm and then an electrode was made.

8. Claims 1, 2, 4-5; 7, 8, 10-11; 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyabayashi et al. (EP 0 549 802 A1).

Miyabayashi et al. teaches an electrode for secondary batteries which comprises a carbonaceous material of the multilayer structure comprising a surface layer and the nucleus enveloped therein and satisfies the following conditions: (1) a true density of not less than 1.80 g/cm³, etc. Miyabayashi et al. teaches on page 2, line 57 to page 3, line 3, that the carbonaceous material should most preferably be 2.20-2.23 g/cm³. Miyabayashi et al. teaches on page 5, lines 5-14, that d₀₀₂ is 3.35 to 3.45 Å. Miyabayashi et al. teaches on page 6, lines 10-11, 12-14, that the diameter is 1-25 μm and the length is preferably 10 mm or shorter, more preferably 5 mm or shorter and that the specific surface area is most preferably 2-8 m²/g.

Art Unit: 1745

9. Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Mitsutaka et al. (JP 5-94838, abstract).

Mitsutaka et al. teaches a carbon type substance to satisfy a specific requirement to a negative electrode. The negative electrode is made into a multilayer structure consisting of a core and a surface layer, and the carbon material of the core is formed that d_{002} is more than 3.36 Å and less than 3.45 Å.

10. Claims 1, 5; 7, 11; 23 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 6-267531(abstract).

JP 6-267531 teaches carbonaceous material particles satisfying condition (1) are mixed with organic compound particles satisfying condition (2). The mixture is heated to carbonise the organic compound. The carbonaceous material particles are covered with a carbonaceous material satisfying condition (3). The conditions are as follows: (1) D_{002} is up to 3.37 Å [0.337 nm], the true density is at least 2.10 g/cm³; D_{002} x-ray wide angle diffraction is at least 3.38 Å [0.338 nm].

11. Claims 1, 7; 23, 25, 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Tanaka et al. (5,344,726).

Art Unit: 1745

Tanaka et al. teaches in column 1, lines 45-53, a carbon anode for a secondary battery in which a carbon active material of the carbon anode is covered with an amorphous carbon particle. The interlayer distance of the carbon in the c-axis direction ranges from 0.337 to 0.360 nm.

12. Claims 1-2, 5; 7-8, 11 are rejected under 35 U.S.C. 102(a) as being anticipated by JP 8-104510, abstract.

JP 8-104510 teaches a carbon composite material with a multilayer structure which consists of carbonaceous particles which are wholly or partially coated with a carbon material having a true density of at least 1.80 g/cm³, a BET specific surface area of up to 30 m²/g and an average particle diameter of up to 35 microns. JP 8-104510 teaches dispersing carbonaceous particles in a heavy oil to bring them into contact and to allow the surface and pores of the carbonaceous particles to be impregnated with or adsorb the polycyclic aromatic molecules.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyabayashi et al. (EP 0 549 802 A1).

Art Unit: 1745

Miyabayashi et al. teaches an electrode for secondary batteries which comprises a carbonaceous material of the multilayer structure comprising a surface layer and the nucleus enveloped therein. Miyabayashi et al. teaches on page 6, lines 10-11, 12-14, that the diameter is 1-25 μm and more preferably 2-20 μm and the length is preferably 10 mm or shorter, more preferably 5 mm or shorter and that the specific surface area is most preferably 2-8 m^2/g .

Miyabayashi et al. discloses the claimed invention as explained above except for specifically teaching that the volume-based integrated value of particles having a diameter of 1 μm or less is 10% or less.

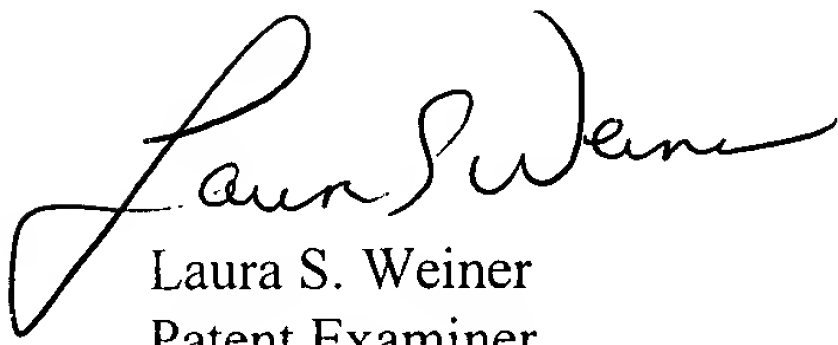
It would have been obvious to one having ordinary skill in the art at the time the invention was made to have 10% or less of particles having a diameter of 1 μm or less because since it has been held that where general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura Weiner whose telephone number is (703) 308-4396. The examiner can normally be reached on Monday-Friday from 7:30 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Maria Nuzzolillo, can be reached on (703) 305-3776. The official fax phone number for the organization where this application or proceeding is assigned is (703) 305-3599.

Art Unit: 1745

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

A handwritten signature in cursive script, reading "Laura S. Weiner". The signature is written in black ink and is positioned to the left of the printed name.

Laura S. Weiner
Patent Examiner
Art Unit 1745
November 15, 1999